

Commonwealth of Kentucky
Division for Air Quality
RESPONSE TO EPA COMMENTS

ON THE TITLE V DRAFT PERMIT V-06-007
EAST KENTUCKY POWER COOPERATIVE, INC.
Hugh L. Spurlock Generating Station
MAYSVILLE, KY
JULY 31, 2006

COMBUSTION SECTION, REVIEWER
SOURCE I.D. #: 21-161-00009
SOURCE A.I. #: 3004
ACTIVITY ID #: APE20040001

SOURCE DESCRIPTION:

An application for renewal of Title V Permit V-97-050 Revision II for the East Kentucky Power Cooperative Inc.-Hugh L. Spurlock Generating Station was received on June 8, 2004. The permit renewal is combined with renewals of the Phase II Acid Rain and NO_x Budget permits, and is combined with a major modification for the construction of boiler Unit 04 (Emission point 17).

East Kentucky Power Cooperative (EKPC) submitted an air permit application dated September 13, 2004 seeking a permit to construct a new 300 megawatt (MW) net nominal generating unit (Emission Unit 17) at its existing Spurlock Generating Station located at Maysville in Mason County, Kentucky. In response to comments from the Division for Air Quality (DAQ), the National Park Service (NPS), and the U. S. EPA, additional information was received from EKPC on December 22, 2004, May 12, 2005, May 26, 2005, August 24, 2005, October 27, 2005, November 9, 2005, November 16, 2005, December 8, 2005, December 21, 2005, January 13, 2006, and January 20 2006. The application was considered to be administratively complete upon receipt of the revised modeling information on January 20, 2006.

The new unit will utilize circulating fluidized bed (CFB) technology. The new CFB boiler will be equipped with Selective Non Catalytic Reduction (SNCR), Pulse Jet Fabric Filters (PJFF), Dry Scrubbing (DS), and Limestone Injection pollution control systems.

Existing equipment at the Spurlock Generating Station includes two (2) Pulverized Coal boilers and one Circulating Fluidized Bed boiler. Emission Unit 01 is a 3500mmBtu/hr dry-bottom wall-fired boiler equipped with an electrostatic precipitator and low-NO_x burner, for which construction began before 1971. The precipitators were installed as a part of the original plant construction but were rebuilt in 1990-1992. In addition, a selective catalytic reduction device was installed in 2003.

Emission unit 02 is a 4850 mmBtu/hr tangentially fired boiler equipped with electrostatic precipitators, low-NO_x burners, and a flue gas desulfurization (FGD) system and was subject to review under 40 CFR 52.21 (PSD) in November, 1979. The FGD system is not currently operating, and has not operated since 1985. A selective catalytic reduction device has been installed since the original Title V permit issuance.

U.S. EPA has brought an action in U.S. District court concerning EPA's allegation of past NSR violations on emission unit 02. A trial is currently scheduled in the near future. Upon resolution of the issues raised, the Division may be required to reopen this permit. Emission unit 08 is a 2500 mmBtu/hr CFB boiler equipped with a baghouse filter, flash dry absorber (FDA), and a selective non-catalytic reduction (SNCR) unit.

The 144 mmBtu/hr auxiliary boiler (Emission Unit 03) is no longer in operation and has been permanently removed from the site. There is a natural draft cooling tower, coal/limestone/ash material handling equipment, an emergency liquefied petroleum gas generator, and fuel oil storage tanks. The existing natural draft cooling tower, coal/limestone/ash material handling equipment, and fuel oil storage tanks will increase utilization when the new CFB boiler becomes operational.

The new facilities that will be constructed as part of this renewal project will include the CFB boiler (Emission Unit 17) and its associated control equipment. Additional material handling units to be constructed include coal piles, coal silos, a fly ash bed, fly ash silo, and a limestone silo. The existing combustion units (Emission Units 01, 02 and 08) are not part of the proposed major modification, and have previously gone through Prevention of Significant Deterioration (PSD) review.

The proposed project constitutes a major modification of a major stationary source as defined in 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality. The proposed project will result in a significant net emissions increase, as defined in 401 KAR 51:001 Section 1(146), of the following regulated air pollutants: Particulate matter (PM & PM₁₀), carbon monoxide (CO), volatile organic compounds (VOC), fluorides, nitrogen oxides (NO_x), sulfur dioxide (SO₂), and sulfuric acid (H₂SO₄) mist. The project will not emit lead above the significant emission rate for lead of 0.6 tons per year (tpy), set forth in 401 KAR 51:001 Section 1(221) and 40 CFR 51. Project emissions of hydrogen sulfide, total reduced sulfur, and reduced sulfur compounds will also be below significant emission levels and are therefore not subject to PSD review.

U.S. EPA REVIEW:

The proposed permit was sent to the US EPA Region 4 on June 12, 2006, for the 45-day review. The U.S. EPA commented on this proposed permit during the 45-day period. Please see below for the comment and a detailed explanation of the changes made to the permit. Minor change made to the permit as a result of the comment in no case relaxed the requirements of any emissions standards, any monitoring, recordkeeping, or reporting.

The comment received from the US EPA Region 4 on the proposed permit

401 KAR 59:016 is not part of the federally-approved state implementation plan for Kentucky. Therefore, all permit terms and conditions that cite this rule as the underlying authority must be designated as "state-only enforceable" in the permit.

Division Response:

The referenced regulation in the comment is now properly identified in the permit, and the statement of basis as a **State Only Enforceable Applicable Regulation:**